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ABSTRACT

This study compares the effectiveness of three methods of teaching object names to young children. These methods were (1) informal play, in which an adult named and described those objects with which a child played; (2) picture reading, in which an adult named and described objects depicted in photographs; and (3) a combination of the first and second methods. A fourth condition (control) was included to compare the amount of spontaneous learning which occurred. Fifteen children (mean age 20 months) enrolled in a day care center were individually pretested by either a classroom teacher or an assistant teacher in order to ensure an equal rate of familiarity/non-familiarity with items used for each condition. The pretest was followed by a 6-week experimental period, during which the children were taught new object names under each of the above three conditions. At the end of the 6-week intervention period, children's familiarity with object names was tested again and their responses were compared with those of the pretest. Results indicated that very young children may learn to name objects more rapidly under the planned conditions of picture-reading and playing with the same objects. The importance of the picture-reading method for the development of young children's language and ways in which day care teachers can use this method are discussed. (Author/MP)

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INCREASING TODDLERS' VOCABULARIES THROUGH PICTURE-READING

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Naming and describing familiar objects and picture-reading are important ways of helping toddlers increase their vocabularies and learn to talk. Yet, it is difficult to find books with single-object illustrations which are meaningful to children just beginning to talk. Even when single-objects are illustrated, the objects may be unrelated, not relevant to the young child, or unrealistic. For example, in one series of cloth-books, drawings of an apple, chair, and a ball of yarn are included.

Frustration with the lack of suitable picture-reading books led the author into developing a series of photo-books for toddlers. Photographs of 12 to 16 categorically related, familiar objects were cardboard-mounted and spiral bound. For example, one book included clothing items (shoes, shirt, pants, socks, etc.), a second one included food items (apple, orange, milk, bread, egg, etc.), a third book focused on familiar household items (table, chair, bed, dishes, etc.), and another included photos of toys (ball, boat, beads, doll, bear, etc.).

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Children to whom the Toddler books were "read" appeared to enjoy hearing and repeating the words and the children

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spontaneously identified matching objects in the room. As a result, questions arose as to whether word-learning would occur more rapidly if the children were allowed to play with the same or highly similar items while looking at pictures of the objects in the Toddler books. No other research was found comparing the rate of learning object-names through play with objects alone versus picture-reading, or a combination of the two. Therefore, a study was conducted to compare the effect of these three ways of helping children learn the name of objects.

Purpose

The purpose of this study was to compare the effectiveness of three methods or conditions for teaching object names to young children. The three methods were: (1) informal play, with an adult naming and describing the object with which the child played; (2) picture-reading, naming and describing photographs of actual objects; and (3) a combination of picture-reading and playing with the actual objects. To compare the amount of spontaneous learning which occurred, a fourth condition of no planned exposure was included for control purposes.

Subjects

Children selected for this study were pre-school children between the ages of 18 and 24 months enrolled in a Day

Care Center in Austin, Texas. Fifteen children were included at the beginning of the intervention period, which began in July, 1977. By the end of the six-week period, only ten children were present for the post-test data collection. The average age of the children for whom both pre- and post-test data were available was 20 months. Testing and instruction were conducted by the classroom teacher or assistant teacher.

Item Selection

The 32 objects used in this study were selected from photographs included in the original series of six Toddler books. Selection was based on the practical ease of using the actual objects for child-play. The objects were assigned for use in one of three experimental conditions or the control condition: (1) play only, (2) book only, (3) play plus book, and (4) no exposure (control condition) on the basis of the children's initial knowledge of the object names.

In order to assure an equal rate of initial familiarity/non-familiarity with items used for each condition, the following procedure was followed. All 15 children were individually tested by the classroom teacher or assistant teacher. Each child was shown photographs of each object and asked to name the objects. Verbatim responses were recorded and responses from all 15 children were rank-ordered according to the number of correct responses. Several items

received the same number of correct responses. Therefore, to further refine the rank-ordering, the number of incorrect responses and related responses were also listed for each item. A related response was one which indicated understanding, although the correct word was not given, i.e., "clock" for "watch" or "coffee" for "cup." An incorrect response was a totally unrelated word or no answer. By subtracting the incorrect responses from the correct ones, a more accurate identification of item familiarity was obtained. Based on this double rank-ordering, the four most familiar items were grouped as set A, the next most familiar group of four items were grouped as set B, and so on. Next, each four-item set was reviewed to determine the item from each set which could most easily be used in water as the first condition (play only) occurred primarily during the swimming and outdoor play period. From the remaining three items in each set, the most durable one was selected for the third condition (play plus book). The remaining two items were randomly assigned to either condition 2 (book only) or condition 4 (no exposure). As additional measure to assure equal difficulty of items in each of the four groups, the items were tallied according to the number of incorrect and related responses given for each. The resulting scores represented a maximum improvement possibility (increase in correctly named items) for each of the categories or the

maximum potential gain scores as follows: (1) play only - 48; (2) book only - 47; (3) book + play - 48; (4) no exposure - 47. On the basis of the above procedure, the opportunity existed for equal improvement in all four categories. Items in each category and the number of errors for each are shown in Table I. Applying chi square to the total number of errors in each group, there were no sig-

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Insert Table I about here

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nificant differences.

During the six-week experimental period, the teacher and assistant teacher spent a part of each day talking with the children about the objects and picture-reading. Condition 1 items (play only) were used during the daily swimming period and outside play periods as the teacher informally named and described the objects. Under condition 2 (book only), the teacher and the assistant teacher spent a brief time each day with small groups of two or three children, showing the pictures, and talking about them. Under condition 3 (play + book), the actual objects were available for free play throughout the day and during the picture-reading period, the teacher or assistant teacher would show the child the object and the picture while naming and describing it. Neither the teacher nor assistant teacher were aware

of the items included in condition 4 (no exposure). Therefore, focus on these words was not planned and if these objects were named or described, it occurred only as a part of the daily routine.

Efforts to keep precise records of the exact amounts of time spent with each child under each condition were finally abandoned as this required too much additional work in an already busy classroom. Also, some children insisted upon continuing to take part in the picture-reading even though their "turn" was over. It was not practical to insist that these children stop looking at the pictures or interacting with the teachers. Therefore, except for the play-only condition, the amount of time spent in the experimental conditions was not consistent for all children. The teacher and assistant estimated that they spent about 10-15 minutes daily with each child using the picture-books. Additional informal naming and discussion of the actual objects occurred spontaneously throughout the day. Thus, the teachers felt the children had more opportunities to learn the names of the objects included in condition 1 (play only) and condition 2 (play + book) than in condition 3 (book only).

Results

At the end of the six-week intervention period, the ten children still attending the child care center were again asked to name photographs of the items. These post-test

results were then compared with the pre-test results obtained earlier for each of these children. In Table II, the number of correct responses for both the pre- and post-test periods are listed.

Insert Table II about here

Pre-test results for this group of children were analyzed using chi square. There were no significant differences in the number of correct responses for the four groups of items prior to the intervention period. The post-test revealed some gain under all four conditions (1 = informal play with objects; 2 = picture reading; 3 = picture reading plus informal play with objects; 4 = no planned exposure). However, the post-test results or correct responses for the four conditions showed a significant difference ($p < .05$) when subjected to chi square. There was less gain, increase in number of correctly named objects under condition 4 (no planned exposure) than under the three conditions of planned learning. The increase in number of correctly named objects was greatest for conditions 2 (picture-reading) and 3 (picture-reading + playing with objects).

For the purposes of this study, only the ability to correctly name objects was evaluated. However, it should be noted that overall verbalization also increased. During the post-test, many children not only named the objects, but they

also described (sometimes in great detail) the object, purpose or use.

Summary

Results of this study indicate that very young children learn to name objects more rapidly under the planned conditions of picture-reading and playing with the same objects (book + play) or of picture-reading (book only). Gains were also made when teachers informally named and described objects with which children were playing (play only). Although an increase in object-naming ability without planned exposure, through incidental learning (the control condition) occurred, the rate of increase was much less.

At this point it is also relevant to consider the subjective views of the teachers. The teachers felt that the children learned to name and talk about the objects more easily and rapidly by looking at the photographs first and later playing with the objects than by simply playing with an object while the teacher talked about it. In their opinion, the children were distracted by playing and did not focus on listening.

Further research should be conducted to determine the effects of teaching vocabulary via photographs and actual objects as well as research into comparisons of learning through photographs versus line drawings. The abstract or semi-abstract drawings in many children's books may not be

illustrative of actual objects, from the child's viewpoint. Very young children may learn more easily when illustrations are realistic, i.e., photographs rather than drawings. Such information could be of assistance to parents and day care personnel in the selection of books for increasing language development of young children and to commercial publishers.

Application

Increasing numbers of young children who are just beginning to learn to talk are included in child-care centers. The need for information and materials to assist teachers in helping children develop language skills will increase. However, the availability of commercial picture-reading books, i.e., simple photographs of common objects arranged by categories is limited.

Teachers do not have to wait for commercial publishers to address their needs, however. Armed with a camera (or with the help of a parent with a camera) teachers can take photographs of common objects and make their own picture books for language development. Start with categories of items which are meaningful to a child, such as food, clothing, toys or furniture. Take photos of familiar items within each category and mount them in a photo album or on cardboard covered with clear contact paper. Show the child the photograph and the actual object, talk about it, and then encourage the child to name and describe it. A focused effort to teach

object-names improves the child's vocabulary. And, children begin to learn that picture-reading and books are linked to reality, a step toward introducing the child to the world of reading.

TABLE I
ITEM GROUPING AND
NUMBER OF INCORRECT RESPONSES
(N = 15)

Condition 1 Play		Condition 2 Book		Condition 3 Play + Book		Condition 4 No Exposure	
Items	Errors	Items	Errors	Items	Errors	Items	Errors
Boat	3	Ball	1	Car	2	Shoes	2
Fish	4	Socks	5	Bear	4	Banana	6
Airplane	7	Doll	3	Glasses	8	Shirt	7
Cup	8	Bread	8	Blocks	6	Chair	8
Bottle	9	Book	8	Orange	6	Toothbrush	6
Beads	8	Bib	11	Camera	11	Watch	7
Fork/Spoon	9	Cheese/ Crackers	11	Comb/ Brush	11	Table/ Chair	11
TOTAL ERRORS	48		47		48		47

TABLE II
PRE- POST CORRECT RESPONSES
(N = 10)

Condition 1 Play			Condition 2 Book			Condition 3 Book + Play			Condition 4 No Exposure		
Items	Pre	Post	Items	Pre	Post	Items	Pre	Post	Items	Pre	Post
Boat	8	10	Ball	9	10	Car	9	10	Shoes	9	10
Fish	7	10	Socks	5	10	Bear	7	10	Banana	3	4
Air-plane	5	9	Doll	7	9	Glasses	3	8	Shirt	5	6
Cup	4	8	Bread	3	8	Blocks	5	10	Chair	4	6
Bottle	3	7	Book	4	10	Orange	6	8	Tooth-brush	4	5
Beads	3	7	Bib	2	6	Camera	1	6	Watch	3	3
Fork/ Spoon	2	6	Cheese/ Crackers	1	8	Comb/ Brush	2	10	Table/ Chair	4	6
TOTAL:											
PRE	32			31			33			32	
POST		57			61			62			40